

## ABSTRACT

### ANTENNA STRUCTURE AND INSTALLATION

An antenna system installation comprising a tower/support structure, and an antenna structure mounted at the top of said tower/support structure, said antenna structure comprises a plurality of antenna elements, a plurality of power amplifiers, each power amplifier being operatively coupled with one of said antenna elements and mounted closely adjacent to the associated antenna element, such that no appreciable power loss occurs between the power amplifier and the associated antenna element, each said power amplifier comprising a relatively low power, relatively low cost per watt linear power amplifier chip, a first RF to fiber transceiver mounted at the top of said tower/support structure and operatively coupled with said antenna structure, and a second RF to fiber transceiver mounted adjacent a base portion of said tower/support structure and coupled with said first RF transceiver by an optical fiber cable.